ILLINOIS INTERCHANGE

TECHNOLOGY TRANSFER TODAY for TOMORROW T²

BUREAU OF LOCAL ROADS AND STREETS

L.T.A.P. QUARTERLY

Vol. 11 No. 3 **Special Edition 2003**

Technology Transfer Center 2003 - 2004 Training Program

INSIDE:

- Training Program Policies 2
- Course Descriptions 3-9
- Training Schedule 10-12
- Enrollment Forms 13-14
- Mathematics Refresher Course 15
- Flagger Training 16
- Videotape Library New Additions 17-18
- Videotape/Publication Order Form 19

Please pass this on to other interested parties in your office.

Illinois Department of Transportation

2003 - 2004 Training Program

The courses listed on the following pages constitute the 2003-2004 Technology Transfer Training Program. These courses are scheduled to be presented on the dates shown and at the locations indicated. As you view the list, NOTE THE PREREQUISITES for many of the courses, especially those relating to math or computers. Instruction is geared toward those students who have the necessary prerequisite skills. These classes are all tuition-free. Travel, meals and lodging expenses, are always the responsibility of the student.

ENROLLMENT: We invite your agency to enroll students in the classes you desire by filling out the enrollment form. Please ***type or clearly print*** the enrollment information completely as this information will be entered in our computer for later use on mailings, rosters and certificates. Return the attached enrollment form by using one of the following methods:

BY MAIL:
Illinois Department of Transportation
Bureau of Local Roads and Streets
Technology Transfer Center
2300 S. Dirksen Parkway, Room 205
Springfield, IL 62764

BY FAX. You may fax your enrollment form by dialing 217/785-7296.

It is important that you **send your enrollments in early**. Some classes fill up quickly and we may not be able to schedule additional classes. Enrollments must be received no later than 3 weeks prior to a class. A letter of confirmation will be sent to you once your enrollment has been processed. The confirmation letter and attached summary are sent to notify you that we did receive your enrollment form and have entered it as shown. When you receive this letter, please check the summary for accuracy of class enrollments and spelling of names. If you need to make any changes, please contact our office.

In cases of excess enrollment, some attendance restrictions will be imposed and in cases of insufficient enrollment, classes may be cancelled. Enrollment in a class will be handled in accordance with our policy below.

ENROLLMENT POLICY: If a class is filled, our enrollment policy gives Local Agencies and Department personnel priority over other enrollments.

The confirmation letter you receive is ***only*** to let you know that we did receive your enrollment form. We will continue to enter enrollments in our computer until three weeks prior to a class. We will then determine if we have more enrollments than we have space. If this occurs, Local Agencies and Department personnel will be given priority to attend the class. Other enrollments will be placed in the class on a first come, first served basis.

If a class has more Local Agency personnel enrolled than we have space, then placement will be on a first come, first served basis. Therefore, it is extremely important to get your enrollments in as soon as possible. It is also essential to let us know as far in advance as possible, when it is necessary to cancel an enrollment in a class. This will afford us the time and opportunity to accommodate other students who wish to attend the class.

Your ***contact person*** will receive a letter approximately 2 weeks prior to the class confirming your registration and giving the classroom information. All others will be notified that they have been placed on a waiting list and will be contacted if there are further cancellations.

CONSULTANT POLICY: Enrollment for Consultants will be allowed in all Technology Transfer Training classes with the exception of Backhoe Safety, Documentation and Flagger Training.

Consultant registration requests for Documentation of Contract Quantities will only be accepted by the Central Bureau of Construction and is on a first-come, first-served basis so requests in writing are required. See the Documentation course description on page 4 for further enrollment details. Flagger Training is for Local Agency operations only.

Due to the popularity of our classes, **we must limit each Consulting firm to a maximum of four students per class.**

CERTIFICATES: A Certificate of Completion will be awarded to those students who successfully complete the final examination for the class. In those classes where final exams are not given, a Certificate of Attendance will be awarded. The majority of T^2 Classes meets the requirements for Professional Development Hours (PDH's). The number of PDH's given per class can be found with the course description.

Please Note:

Attendance at T^2 training classes by students who have not enrolled through the Center has led to some classes being overcrowded and has created problems with record keeping and certificate distribution.

Instructors will not admit students into their classes if not enrolled through the Center. Certificates will not be issued to students that have not pre-enrolled.

We want to be fair to those agencies that have enrolled early and have followed our enrollment guidelines - especially those that have been placed on a waiting list for attendance. If you have any questions, contact Kevin Burke at (217) 785-5048.

Technology Transfer Training Program

Backhoe Safety and Rehabilitating Streets and Highway Classes To Be Scheduled

The Technology Transfer Center Staff is working with different backhoe manufacturers throughout the state to schedule some backhoe safety classes **for local agencies only.** Due to the projected popularity of this course, we may need to limit each local agency to a maximum of 2 students per class.

We are also in the process of redeveloping the Rehabilitating Streets and Highways class. Information on these courses will be mailed as soon as the class scheduling is complete. Thanks for you patience.

COURSE DESCRIPTIONS: 2003 - 2004

Bridge Construction Inspection

PURPOSE: This course will enable students to inspect the construction of bridges to ensure compliance with plans and specifications.

√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 15, or equivalent; familiarity with bridge terminology; and probability of assignment to bridge construction inspection within 18 months.

TOPICS TO BE COVERED: Bridge foundations, substructures, steel superstructures, concrete superstructures, deck paving and documentation.

LENGTH OF COURSE: 2 days.

PDH's: 12.0

Confined Space Awareness

PURPOSE: To familiarize the student with what a confined space is, how to recognize hazards and prepare for safety.

TOPICS TO BE COVERED: Confined space hazards, Federal and State laws, definitions of what a confined space is, air monitoring and applicable policies.

LENGTH OF COURSE: 2 hours.

PDH's: 2.0

NOTE: This is a 2 hour class that will be offered in the morning and the Trenching and Shoring Safety Class will be offered in the afternoon. Those students who wish may enroll in both classes for the same day.

Culvert Hydraulics

PURPOSE: To enable the student, with some supervision, to establish design constraints and size culverts using both a manual solution (HDS5) and computer applications.

√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 17, or equivalent; familiarity with basic computer usage and hydraulic terminology, ability to read and understand nomographs; the probability of being involved in culvert design.

TOPICS TO BE COVERED: Selecting design parameters, determining the headwater depth and outlet velocity for a pipe or box culvert with inlet or outlet control, use of FHWA culvert nomographs, and use of FHWA's culvert computer program (HY8).

LENGTH OF COURSE: ½ day.

PDH's: 3.0

Documentation

(for Local Agency Highway Personnel Only)

PURPOSE: To provide the student with the ability to document, with some supervision, contract quantities to Federal and State standards.

√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 15, or equivalent; **one year construction experience** and familiarity with general highway construction terminology and practice.

TOPICS TO BE COVERED: Project diary entries; quantity book preparation and entries; cross-reference system; extra work reports, and the measurement and calculation of pay items for pay quantities occurring in road and bridge plans.

LENGTH OF COURSE: 3 days.

PDH's: 18.0

NOTE: The Technology Transfer Documentation classes will be offered to local agency personnel only. Consultant registration for Documentation of Contract Quantities is on a first-come, first-served basis so requests in writing are required. A Bureau of Construction Registration Form (available on the web site at http://www.dot.state.il.us/contractquantities/registration.html) is required for each individual wishing to attend class. Requests will be accepted via fax at 217/524-4922, Attn: Documentation Registration, or by e-mail at cbctraining@nt.dot.state.il.us. Consultant registration requests will only be accepted by the Central Bureau of Construction. Requests by phone and requests prior to the posted registration dates will not be accepted.

Erosion Control

PURPOSE: To familiarize the student with different types of erosion control methods that are available, and to discuss when, where, and how to install each type.

√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 5 or equivalent.

TOPICS TO BE COVERED: Temporary and permanent erosion control measures, planned management design, NPDES permits, seeding, mulching, erosion control blankets, and IDOT erosion control design standards.

LENGTH OF COURSE: 1 day.

PDH's: 6.0

Flagger Training

(for Local Agency Highway Personnel Only)

PURPOSE: This class provides training to local agency personnel for their day labor and maintenance activities. It meets requirements established by the Manual on Uniform Traffic Control Devices (MUTCD) and the Occupational Safety and Health Administration.

√ **PREREQUISITES**: This course is available to local agency highway personnel holding a valid driver's license or an Illinois Identification Card from the Secretary of State.

TOPICS TO BE COVERED: Traffic control devices, the flagger's role in work zone safety, Illinois laws and responsibilities, and flagging procedures.

LENGTH OF COURSE: ½ day.

PDH's: 3.0

NOTE: This class does not meet the flagger certification requirements for projects constructed in accordance with the Standard Specifications for Road and Bridge Construction published by the Illinois Department of Transportation. A Flagger Training Card may not be used in place of a Certified Flagger Card.

Hazardous Materials First Responder

PURPOSE: This training is intended to meet the requirements of the Occupational Safety and Health Administration and United States Environmental Protection Agency (OSHA/USEPA) Hazardous Waste Operations and Emergency Response Final Rule (29 CFR 1910.120, effective March 6, 1990) and is for personnel who may be the first-on-the scene at a hazardous materials incident.
TOPICS TO BE COVERED: Basic hazard recognition, identification, reporting, and self-protection for individuals who may do preliminary observation of an event. *It does not provide the necessary hazard recognition and protective skills to equip you to deal effectively and safely with activities beyond the awareness level.*
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Highway Engineering Principles

PURPOSE: For engineering and technical employees to familiarize or review their knowledge of highway terminology and procedures used in conjunction with a construction or maintenance project from its initial stage to final completion.
√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 17 or equivalent; involvement in highway design or highway project development activities.
TOPICS TO BE COVERED: Basic mathematics; Standard Specifications; reading plans, specifications, material proposals, maintenance procedures and final papers.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Highway Signing

PURPOSE: Placement of traffic signing to help ensure highway safety by providing for the orderly and predictable movement of all traffic, motorized and non-motorized, throughout the highway system, and to provide such guidance and warnings as are needed to ensure the safe and informed operation of individual elements of the traffic stream.
√ **PREREQUISITES**: The probability of assignment to sign erection responsibilities.
TOPICS TO BE COVERED: Traffic control sign design, placement, uniformity and maintenance.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

MFT Accounting and Auditing

PURPOSE: This course will enable students to properly record and account for MFT funds utilized on local agency projects.
TOPICS TO BE COVERED: Accounting and auditing principles of MFT funds as established by the Illinois Department of Transportation.
LENGTH OF COURSE: 1 day.
PDH's: N/A

OSHA 10-Hour

PURPOSE: To provide safety training for highway personnel on several work related topics. Participants receive an OSHA safety certificate.
TOPICS TO BE COVERED: Cranes, electrical, hazard communication, ladders & stairs, fire protection, personal protection equipment, material handling, tools, walking working surfaces, and welding safety.
LENGTH OF COURSE: 1½ days.
PDH's: 10.0

Pavement Construction Inspection

PURPOSE: To enable the student to inspect the construction of bituminous surface treatments, asphalt concrete and PCC pavements to ensure compliance with plans and specifications.
√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 15, or equivalent; and the probability of inspection of pavement construction within 18 months.
TOPICS TO BE COVERED: Bases: granular and stabilized; Surface Treatment: preparation and prime, design, and construction control; Bituminous Concrete: road mix and low and high quality plant mixes; Portland Cement Concrete: concrete placement, reinforcement, joints, finishing and curing, intersection joint design and field layout.
LENGTH OF COURSE: 3 days.
PDH's: 18.0

Pavement Maintenance

PURPOSE: To enable student to recognize the causes of pavement failure and to make and/or recommend corrective measures including alleviating the cause, selecting the proper materials and methods, and documenting the work accomplished. Discusses various types of road surfaces with the emphasis on flexible bases and developing a pavement management system.
√ **PREREQUISITES**: Knowledge of equipment and materials (particularly asphaltic materials); and probability of involvement in scheduling pavement maintenance activities.
TOPICS TO BE COVERED: Drainage and subsurface maintenance; patching and resurfacing material; street patching methods; portland cement concrete, and utility cuts; seal coats and crack sealing; and developing a systematic approach to pavement maintenance.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Small Drainage Structure Construction Inspection

PURPOSE: This course will enable students to inspect the construction of pipe culverts, storm sewers and related structures to ensure compliance with plans and specifications.
√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 15, or equivalent; familiarity with bridge and culvert terminology; and probability of assignment to drainage structure inspection within 18 months.
TOPICS TO BE COVERED: Culvert - Sewer differences, trenching, bedding, pipe installation, backfill, and documentation. Precast concrete box culverts, pipe liners, and other new methods will also be reviewed.
LENGTH OF COURSE: 2 days.
PDH's: 12.0

Snow Removal and Ice Control for New Drivers

PURPOSE: Introduction to snow removal and ice control operations; including major components, equipment adjustment and calibration, and proper snow and ice control methods.

√ **PREREQUISITES**: Probability of assignment to snow removal responsibilities within 12 months.

TOPICS TO BE COVERED: Equipment preparation; snow removal procedures and methods; special situations; after-storm procedures; spreader calibration; public relations; and safety.

LENGTH OF COURSE: 1/2 day. All snow removal and ice control classes start at 8:30 a.m., if this class becomes full a second class will be held at 1:00 p.m.

PDH's: N/A

NOTE: Copies of the video used in this class are available for Local Agencies who would want a copy for their own training purposes. Copies may be obtained through the Video/Publication Library Catalog.

Structure Information & Management Systems (SIMS)

PURPOSE: To introduce students to SIMS concepts, including its relationship to the Structure Information and Procedure (SIP) Manual and the Illinois Structure Information System (ISIS).

√ **PREREQUISITES**: Knowledge of Microsoft Access is helpful but not required.

TOPICS TO BE COVERED: Students will learn how to use all the reports and forms already available in SIMS, and will also learn how to use SIMSLink, which allows the user to create simple queries and reports. Computers will be provided for "hands-on" training and handouts will also be provided.

LENGTH OF COURSE: 1 day.

PDH's: 6.0

Survey I - Beginning

PURPOSE: To enable potential survey personnel, with some supervision, to know the use and care of basic surveying instruments and equipment.

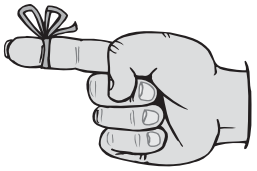
√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 17, or equivalent. Ability to perform math equations on a calculator.

TOPICS TO BE COVERED: Surveying mathematics; use, care and maintenance of the transit, level and chain; horizontal angle measurements with transit; leveling and the leveling rod; chaining; field note-keeping and safety.

LENGTH OF COURSE: 3 days.

PDH's: 18.0

Remember to type or clearly print your enrollment form and send it in as soon as possible!



Survey II - Intermediate

(Highway Construction Surveying)

PURPOSE: To enable the student, with some supervision, to establish the alignment of the route and to obtain data necessary for the preparation of highway construction plans.

√ **PREREQUISITES**: Mathematics Refresher Course, Units 1 through 17, or equivalent; knowledge of basic surveying operations and familiarity with surveying instruments and equipment; familiarity with surveying and construction terms, or completion of Beginning Surveying Class. Ability to perform math equations on a calculator.

TOPICS TO BE COVERED: Horizontal alignment; vertical alignment; horizontal and vertical curves; super-elevations, topography; cross sectioning; and traversing.

LENGTH OF COURSE: 4 days.

PDH's: 24.0

Survey III - Construction Staking

PURPOSE: To enable the student, with some supervision, to stake common construction jobs.

√ **PREREQUISITES**: Attendance in both the Beginning and Intermediate Surveying classes or equivalent experience.

TOPICS TO BE COVERED: Staking theory, special staking, slope staking, bridge staking, culvert staking and pavement staking.

LENGTH OF COURSE: 3 days.

PDH's: 18.0

***Survey Enrollees Please Note**: Mathematics and field work are important parts of surveying instruction. The surveying courses have been updated to provide more of these elements. The first day of the Survey I class provides essential survey math instruction. This means that less math instruction will be offered in the Survey II and III classes so that field exercises can be added (weather permitting). **We strongly suggest that students enroll in Survey I prior to enrolling in Survey II & III or be proficient in math and able to perform trigonometric calculations on a calculator.**

Survey IV - Mapping (Legal Description, GPS & State Plane Coordinates)

PURPOSE: Provides the ability to utilize descriptions of land and maps for highway use, explains Global Positioning Systems and State Plane Coordinates.

√ **PREREQUISITES**: Knowledge of surveying operations, familiarity with surveying terminology, and equivalent surveying math skills.

TOPICS TO BE COVERED: Use of different types of maps (Quad and USGS), use of stereoscopes, rectangular survey, legal descriptions, GPS, and conversion to state plane coordinates.

LENGTH OF COURSE: 2 days.

PDH's: 12.0

Team Building for Supervisors and Crew Leaders

PURPOSE: Stresses the importance of team building. Provides management and conflict resolution techniques to perform more effectively and efficiently.
TOPICS TO BE COVERED: The importance of team building, management and conflict resolution techniques.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Trenching and Shoring Safety

PURPOSE: To provide students with safety procedures to follow when involved in trenching and shoring operations.
TOPICS TO BE COVERED: Utility notification, soil mechanics, slope requirements, manual and visual testing, shoring techniques and equipment.
LENGTH OF COURSE: 2 hours.
PDH's: 2.0
NOTE: This is a 2 hour class that will be offered in the afternoon after the Confined Space Awareness Class. Those students who wish may enroll in both classes for the same day.

Understanding Specifications

PURPOSE: This course will enable students to identify the different types of contract documents and explain the hierarchy of these contract documents, to understand the format and use of the Standard Specifications, and to determine when and how to write effective special provisions and plan notes.
√ **PREREQUISITES**: Involvement in highway design, highway project development, or highway construction activities.
TOPICS TO BE COVERED: Specifications, special provisions, pay items, and plans.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Urban Tree Preservation-Protection

PURPOSE: To familiarize the student with how to preserve and protect valuable tree resources during construction and development.
TOPICS TO BE COVERED: When to save a tree or forested area, when to use a tree bank system and when to do a land swap. Tree protection and tree preservation policies will be provided and discussed along with case examples from local units of government. Examples of construction designs in limited areas will be provided. Establishment of urban forestry programs and proper tree planting care will be addressed.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

Work Zone Safety for Projects (Crews)

PURPOSE: To provide the student with the basic elements required for work zone traffic control and protection.
TOPICS TO BE COVERED: Need for traffic control, laws and legal considerations, applicable portions of the Manual on Uniform Traffic Control Devices, developing traffic control plans, work zone traffic control and the Work Area Protection Guide for street and utility repairs.
LENGTH OF COURSE: 1 day.
PDH's: 6.0

T2 Training Program

COURSE	#	LOCATION	2003 OCT	2003 NOV	2003 DEC	2004 JAN	2004 FEB	2004 MAR	2004 APR
Bridge Construction Inspection	1	Springfield			9-10				
Confined Space Awareness	2	Springfield				8			
	3	Woodstock						10	
Culvert Hydraulics	4	Springfield					27		
Documentation	5	Schaumburg				13-15			
	6	Peoria					3-5		
Erosion Control	7	Peoria				6			
	8	Oglesby					10		
	9	Glen Ellyn						11	
Flagger Training	10	Urbana						4	
	11	Mattoon						9	
	12	Peoria						18	
	13	Glenview							6
	14	Carbondale							21
	15	Moline							21
Haz. Mat. First Responder	16	Mattoon			10				
	17	Glenview				13			
	18	Glen Ellyn						18	
Highway Engineering Principles	19	Schaumburg					3		
Highway Signing	20	Schaumburg					18		
	21	Mattoon					26		
MFT Accounting and Auditing	22	Peoria					25		
	23	Schaumburg						16	
	24	Edwardsville							6
	25	Springfield							14
OSHA 10-Hour	26	Glenview				27-28			
Pavement Const. Inspection	27	Carbondale				13-15			
	28	Springfield					17-19		
	29	Glen Ellyn						15-17	
Pavement Maintenance	30	Glenview	28						
	31	Woodstock		4					
Small Drainage Structure Inspection	32	Schaumburg						10-11	
	33	Moline							7-8

T2 Training Program			2003			2004			
COURSE	#	LOCATION	OCT	NOV	DEC	JAN	FEB	MAR	APR
Snow and Ice Control	34	Carbondale	9						
	35	Peoria	29						
	36	Glen Ellyn		6					
	37	Moline			3				
Street Sweeping-Air	38	Elgin			3				
Street Sweeping-Mechanical	39	Elgin			2				
Structure Information & Management Systems (SIMS)	40	Dixon						10	
	41	Paris						18	
	42	Schaumburg						24	
	43	Schaumburg						25	
	44	Springfield						30	
	45	Springfield							15
	46	Peoria							20
Survey I - Beginning	47	Schaumburg				20-22			
	48	Bloomington				27-29			
Survey II - Intermediate	49	Schaumburg					24-27		
	50	Bloomington						2-5	
Survey III - Construction Staking	51	Schaumburg						29-31	
	52	Bloomington							13-15
Survey IV - Mapping	53	Schaumburg							7-8
Team Building	54	Woodstock					10		
	55	Schaumburg						23	
Trenching and Shoring Safety	56	Springfield				8			
	57	Woodstock						10	
Understanding Specifications	58	Schaumburg		5					
	59	Peoria			3				
Urban Tree Preservation-Protection	60	Schaumburg					5		
	61	Mattoon							7
	62	Peoria							21
Work Zone Safety (Crews)	63	Urbana			9				
	64	Woodstock					11		
	65	Glen Ellyn						24	

2003 - 2004 T2 Classes	North Location		Central Location		South Location
	Schaumburg	Other Cities	Springfield	Other Cities	Other Cities
Bridge Construction Inspection			Dec. 9-10		
Confined Space Awareness		Woodstock: Mar. 10	Jan. 8		
Culvert Hydraulics			Feb. 27		
Documentation	Jan. 13-15			Peoria: Feb. 3-5	
Erosion Control		Oglesby: Feb. 10 Glen Ellyn: Mar. 11		Peoria: Jan. 6	
Flagger Training		Glenview: Apr. 6 Moline: Apr. 21		Urbana: Mar. 4 Mattoon: Mar. 9 Peoria: Mar. 18	Carbondale: Apr. 21
Haz. Mat. First Responder		Glenview: Jan. 13 Glen Ellyn: Mar. 18		Mattoon: Dec. 10	
Hwy. Engineering Principles	Feb. 3				
Highway Signing	Feb. 18			Mattoon: Feb. 26	
MFT Accounting & Auditing	Mar. 16		Apr. 14	Peoria: Feb. 25	Edwardsville: Apr. 6
OSHA 10-Hour		Glenview: Jan. 27-28			
Pavement Construction Inspection		Glen Ellyn: Mar. 15-17	Feb. 17-19		Carbondale: Jan. 13-15
Pavement Maintenance		Glenview: Oct. 28 Woodstock: Nov. 4			
Small Drainage Structure Insp.	Mar. 10-11	Moline: April 7-8			
Snow and Ice Control		Glen Ellyn: Nov. 6 Moline: Dec. 3		Peoria: Oct. 29	Carbondale: Oct. 9
Street Sweeping-Air		Elgin: Dec. 3			
Street Sweeping-Mechanical		Elgin: Dec. 2			
Structure Information & Management Systems (SIMS)	Mar. 24 Mar. 25	Dixon: Mar. 10	Mar. 30 Apr. 15	Paris: Mar. 18 Peoria: Apr. 20	
Survey I-Beginning	Jan. 20-22			Bloomington: Jan. 27-29	
Survey II-Intermediate	Feb. 24-27			Bloomington: Mar. 2-5	
Survey III-Const. Staking	Mar. 29-31			Bloomington: Apr. 13-15	
Survey IV-Mapping	Apr. 7-8				
Team Building	Mar. 23	Woodstock: Feb. 10			
Trenching & Shoring Safety		Woodstock: Mar. 10	Jan. 8		
Understanding Specifications	Nov. 5			Peoria: Dec. 3	
Urban Tree Preservation-Protection	Feb. 5			Mattoon: Apr. 7 Peoria: Apr. 21	
Work Zone Safety (Crews)		Woodstock: Feb. 11 Glen Ellyn: Mar. 24		Urbana: Dec. 9	

Technology Transfer Training Program: 2003 - 2004

ENROLLMENT FORM

Return to:
Illinois Department of Transportation
Technology Transfer Center
2300 S. Dirksen Parkway, Room 205
Springfield, IL 62764

FAX #: 217/785-7296

Please **Print** students' names as they should appear on their Certificate and check the boxes for each course desired.

	Bridge Construction Inspection	Confined Space Awareness		Culvert Hydraulics	Documentation		Erosion Control			Flagger Training						Haz. Mat. First Responder			Highway Eng Principles	Highway Signing		MFT Accounting and Auditing				OSHA 10-Hour	Pavement Construction Inspection			Pavement Maintenance		Small Drainage Structure Inspection	
	Dec. 9-10	Jan. 8	Mar. 10	Feb. 27	Jan. 13-15	Feb. 3-5	Jan. 6	Feb. 10	Mar. 11	Mar. 4	Mar. 9	Mar. 18	Apr. 6	Apr. 21	Apr. 21	Dec. 10	Jan. 13	Mar. 18	Feb. 3	Feb. 18	Feb. 26	Feb. 25	Mar. 16	Apr. 6	April 14	Jan. 27-28	Jan. 13-15	Feb. 17-19	Mar. 15-17	Oct. 28	Nov. 4	Mar. 10-11	Apr. 7-8
Location Code:	SP	SP	WO	SP	SC	PE	PE	OG	GL	UR	MA	PE	GV	CA	MO	MA	GV	GL	SC	SC	MA	PE	SC	ED	SP	GV	CA	SP	GL	GV	WO	SC	MO
Class Number:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33

Name of Agency Department

Business Address Telephone

City - State - Zip

Contact Person (Please Print) Fax #

Signature Title

Location Codes: **BL** = Bloomington **CA** = Carbondale **DI** = Dixon **ED** = Edwardsville **EL** = Elgin **GL** = Glen Ellyn **GV** = Glenview **MA** = Mattoon **MO** = Moline **OG** = Oglesby **PA** = Paris **PE** = Peoria **SC** = Schaumburg **SP** = Springfield **UR** = Urbana **WO** = Woodstock

Technology Transfer Training Program: 2003 - 2004

ENROLLMENT FORM

Return to:
Illinois Department of Transportation
Technology Transfer Center
2300 S. Dirksen Parkway, Room 205
Springfield, IL 62764

FAX #: 217/785-7296

Please **Print** students' names as they should appear on their Certificate and check the boxes for each course desired.

	Snow and Ice Control				Street Sweeping-Air	Street Seeeping-Mech.	Structure Information & Management Systems (SIMS)							Survey I - Beginning		Survey II - Intermediate		Survey III - Construction Staking		Survey IV - Mapping	Team Building	Trenching and Shoring Safety		Understanding Specifications		Urban Tree Preservation-Protection			Work Zone Safety (Crews)		
	Oct. 9	Oct. 29	Nov. 6	Dec. 3	Dec. 3	Dec. 2	Mar. 10	Mar. 18	Mar. 24	Mar. 25	Mar. 30	Apr. 15	Apr. 20	Jan. 20-22	Jan. 27-29	Feb. 24-27	Mar. 2-5	Mar. 29-31	Apr. 13-15	April 7-8	Feb. 10	Mar. 23	Jan. 8	Mar. 10	Nov. 5	Dec. 3	Feb. 5	Apr. 7	Apr. 21	Dec. 9	Feb. 11	Mar. 24
Location Code:	**CA**	**PE**	**GL**	**MO**	**EL**	**EL**	**DI**	**PA**	**SC**	**SC**	**SP**	**SP**	**PE**	**SC**	**BL**	**SC**	**BL**	**SC**	**BL**	**SC**	**WO**	**SC**	**SP**	**WO**	**SC**	**PE**	**SC**	**MA**	**PE**	**UR**	**WO**	**GL**
Class Number:	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**

Name of Agency Department

Business Address Telephone

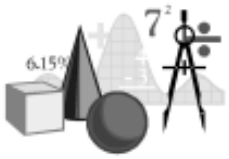
City - State - Zip

Contact Person (Please Print) Fax #

Signature Title

Location Codes: **BL** = Bloomington **CA** = Carbondale **DI** = Dixon **ED** = Edwardsville **EL** = Elgin **GL** = Glen Ellyn **GV** = Glenview **MA** = Mattoon **MO** = Moline **OG** = Oglesby **PA** = Paris **PE** = Peoria **SC** = Schaumburg **SP** = Springfield **UR** = Urbana **WO** = Woodstock

Mathematics Refresher Course



PURPOSE: This course is designed as a math refresher for individuals planning on enrolling in the Technology Transfer Training Program. The course description specifies what level of skill must be reached in the Math Refresher course to meet the required prerequisites for that class.

FORMAT: This self study course consists of the 18 modules listed below, which can be studied either at home or on the the job. Each module has a step-by-step explanation of the subject it covers and it has job-related problems at the end of each unit. A Preliminary Screening Test can be used to determine which areas the student needs to review. This pretest is available upon request. The Preliminary Screening Test and the Math Refresher Course are both available at no cost to local agencies. The modules of the course are available with English or Metric units. Please specify your preference when completing the order blank below.

1. Addition and Subtraction
2. Multiplication and Division
3. Rounding and Degrees of Accuracy
4. Fractions
5. Formulas
6. Solving Equations
7. Length and Weight Units
8. Liquid and Weight Units
9. Averages and Percentages
10. Proportion
11. Square Root, Pythagorean Theorem
12. Area: Triangles, Rectangles, Trapezoids
13. Area: Circles
14. Volume: Prisms, Average End Areas
15. Volume: Cones and Combinations
16. Trigonometry of Right Triangles
17. Trigonometry of Oblique Triangles
18. Metric Module

MATH REFRESHER COURSE ORDER FORM

Name _____ **Title** _____

Agency _____ **Phone** ( ) _____

Address _____

City _____ **State** _____ **Zip Code** _____

Please send me the following items I have marked.

☐ PRELIMINARY SCREENING TEST

MATH REFRESHER COURSE MODULES

☐ **METRIC** ☐ **ENGLISH** ☐ **BOTH**

001	**002**	**003**	**004**	**005**	**006**	**007**	**008**	**009**
010	**011**	**012**	**013**	**014**	**015**	**016**	**017**	**018**

Mail Requests To:
Illinois Department of Transportation
Bureau of Local Roads and Streets
Technology Transfer Center - Room 205
2300 South Dirksen Parkway
Springfield, Illinois 62764
Fax Number (217) 785-7296

FOR OFFICE USE ONLY:

Order # _____

Date Rcvd. _____

Mailed _____

Flagger Training for Local Agencies

Flaggers are the most important members of your construction or maintenance crew. In order to protect your work zones, every flagger is required to know proper flagging procedures and use the appropriate equipment. Chapter 6E of the Manual on Uniform Traffic Control (MUTCD) contains all of the flagger requirements and recommendations. The MUTCD may be downloaded at http://mutcd.fhwa.dot.gov/index.htm.

The Technology Transfer Center offers Flagger Training as part of our training program. We have two dedicated instructors that will come to your location and train your employees in proper procedures. A minimum of 25 people is required to offer this training. If you do not have this many employees, work with other local agencies in you area to organize a joint class.

Who should receive this training? This training is appropriate for any local agency employee who may perform as a flagger in emergency or non-emergency situations. This includes highway department employees (workers and supervisors), public utility employees, police officers, and firemen (volunteer and full-time).

If you would like to schedule a class in your area please fill out the form below and mail it to the Illinois Department of Transportation, Technology Transfer Center, 2300 South Dirksen Parkway, Room 205, Springfield, Illinois 62764 or fax it at (217) 785-7296.

Flagger Training Class Request

Agency _____

Contact Person _____ **Number of Students**_____

Agency Address _____

City _____ **State** _____ **Zip Code** _____

Phone _____ **Requested Training Date** _____

Have your employees taken our course before? Yes No

Training Room on Site? Yes No Could other agencies attend? Yes No

TV/VCR? Yes No

Flagger Training is for Local Agency personnel only.

Videotape Library New Additions

The following videotapes have recently been added to the videotape library. If you would like to borrow any of these videos, please complete the Video/Publication request form on page 19. Tapes **V007 Brush and Tree Removal** and **V011 Mowing** have also been updated.

V078 Frost Action in Soils Explains what frost damage is and how freezing temperatures and moisture effects the subgrade, and how it can damage and deteriorate various materials through thawing and freezing cycles.

V079 Protecting Our Pavement: PREVENTIVE Maintenance This video provides information on the advantages of preventive maintenance.

V534 Construction Trenching and Shoring: Hard Hat Series OSHA estimates that approximately 90 deaths occur every year because someone didn't know basic trenching and shoring safety guidelines. The practical safeguards covered here can help prevent these needless casualties. Topics include: evaluating an excavation site, effective worker protection systems, and emergency response.

V535 Defensive Driving for Government Employees This new video program looks at techniques to help prevent accidents from happening, and in the case of unavoidable accidents, help lessen their severity. Topics include: What is defensive driving?; respect for the vehicle; your responsibility as a driver; proper/safe driving techniques; seat belts; driving in poor weather; speeding, right-of-way, passing, tailgating; and distractions and road rage.

V536 PPE: Don't Start Work Without It (Safety 101) Learn to use the right equipment for each job, and use it correctly. Topics include: eye and face protection; hearing protection; hand & foot protection; basic PPE rules.

V537 Construction Lockout/Tagout Preventing unexpected start-ups of equipment during servicing and maintenance is as easy as the six-step safety procedure summarized in this video program. Topics include: how lockout/tagout systems work; when to use lockout/tagout procedures; six steps required in lockout/tagout process.

V538 Construction Confined Space Entry Working safely in a confined space requires learning the necessary skills to prevent or escape dangerous, or even fatal accidents. Preparation begins with this overview: Identifying Confined Spaces & Their Hazards; OSHA's Confined Entry Permit Program; Duties of Confined Space Entry Team.

V539 Flagging: You're the Director The job of the flagger is crucial for preventing highway work zone accidents. However, flaggers are often not properly trained or not trained at all. This valuable video program reviews vital flagging procedures including: flagger requirements; proper clothing and equipment; flagger position; and stopping and releasing traffic.

V540 Highway Work Zone Safety: The Basics This video program will help your employees understand and comply with the MUTCD and learn what it takes to keep themselves, drivers, and pedestrians safe. Topics include: being safety conscious; traffic control devices; slowing down traffic; detours & closures; and communication.

V541 Heat Stress This video program focuses on preventing illnesses and minimizing safety hazards. Complies with NIOSH and OSHA recommendations. Topics include: hazards of hot environments and first aid.

V542 Construction Fall Protection: Get Arrested! This new program will help your employees work safer and smarter. It will also train employees on what's new, what's in and what's out, as far as fall arrest equipment and safety procedures go. Topics include: requirements for guardrail construction, strength and minimum height standards; proper anchorage techniques; when & how to use lifelines & positioning devices.

V543 Winter Safety Freezing temperatures and icy roads. They're not only uncomfortable - they can be deadly. Either on the job or during recreational time, winter weather can pose special dangers to everyone. Topics include: signs and treatment of hypothermia and frostbite; prevention of hypothermia and frostbite; and off the job winter safety.

V544 Road Rage Explains road rage and its causes from aggressive drivers to rude drivers. Various ways of stress management and ways to avoid confrontations with rude operators.

V545 FHWA Emergency Relief Program Provides step by step procedures to follow in repairing damage to federal aid highways. Discusses eligibility procedures, including Gubernatorial Proclamation. Explains procedures in emergency or permanent repairs. Assessment of damages, eligibility in permanent and or emergency repairs, explains items that are covered by ER funds and items that are not. Explains detailed damage reports, quick relief method for catastrophic damage.

V546 Stockpile Recovery to Minimize Segregation This video shows how aggregates should be stockpiled to reduce segregation.

V547 Getting Your Message Out: Evaluating Public Awareness of Transportation Issues Talks of how our transportation system affects the country. How to create positive public relations, and creating a communications plan for the public. Discusses how to work with the media, and establishing credibility with media. Emphasizes the importance of using credible spokespeople to explain transportation policies. Also covers promoting public service announcements to get messages out with greater success.

V548 NAPA Paving Practices for Quality This video reviews safety practices pertaining to Hot Mix Applications in three stages including paver operations and roller operations. Covers different tasks performed by laborers and tips on proper paving techniques.

V549 Comparable Concepts for Replacement Housing This video covers how homes and business' are evaluated when being bought for right of way. Explains how homes are evaluated and compared according to space and value. Also covers other factors such as location factors and assessments. Also covers relocations of business, and what is paid out for relocation and what will be reimbursed to business.

V550 New Hampshire Public Works Mutual Aid Program This video explains how local agencies can work together when a disaster strikes. A mutual aid program ensures that public safety is restored quickly and effectively.

V551 Making the Effort Works: Reducing Utility Delays During Construction Showing you how the utility companies and DOT's are working together to ensure fast, efficient, and least expensive work as possible.

V552 Ultra-Thin Whitetopping: Today's Choice for Durable Pavement Overlays This video shows an alternative to HMA for overlays. It provides benefits and a brief overview of the Ultra-Thin Whitetopping process.

V553 Night Lights: How Retroreflectivity Makes Our Roads Safer This video explains what materials are used in the construction of signs, and their value to the driver in bad weather, also discusses updating and sign maintenance.

V554 Earth & Gravel Road Maintenance 5 Part Series. Part 1 - Forest Roads and the Environment, Part 2 - Reading the Traveled Way, Part 3 - Reading Beyond the Traveled Way, Part 4 - Smoothing and Reshaping the Traveled Way, and Part 5 - Maintaining the Ditch and Surface Cross Drains.

V555 Effective Pavement Preservation by Identifying Distress Conditions, Causes, and Cures This video provides a brief description of HMA and PCC pavement distresses. It also provides possible cures for each type of distress.

V556 Qualification-Based Selections This video explains the qualification-based selection process and how it is used for professional or public projects. Explains selection process and how to evaluate and rank different firms for your project. Selection of qualified engineers-architect for projects and avoiding low bid catastrophes.

V557 It's About Time.. Traffic Signal Management: Cost Effective Street Capacity This video discusses traffic movement and ways to improve flow by using existing equipment, or updating equipment to improve traffic flow which may also cure commuting problems such as road rage, traffic accidents and congestion. Timing of traffic lights or lane additions are also options which are also discussed in the video.

V558 Understanding Superpave Mix Design Produced in cooperation with the FHWA, this video explains the basics of Superpave material selection, laboratory compaction, and the required mix evaluation processes. This video is based on the national recommendations; however, IL DOT has made minor changes to the national recommendations.

V559 Sensible Wood Cutting: Tips from the Pros This video provides some basic tips and techniques that can make your cutting experience safer and more productive. It covers: personal protective gear, safety features of Husqvarna chain saws, making a cutting plan, and various felling techniques.

VIDEO/PUBLICATION ORDER FORM

Name _____ Title _____

Agency _____ Phone (____) _____

Address _____

City _____ State _____ Zip _____

Publications Requested:

P_____ # P_____ # P_____ # P _____ # P_____ # P_____ # P_____

L _____ # L _____ # L _____ # L _____ # L _____ # L _____ # L _____

FTB ____ FTB ____ FTB ____

Loan/Reproduction Videotapes Requested: LOAN ☐

Circle or write in the number of the requested videos below. Remember to send one video tape for each video you want copied. If you only want to borrow the tapes, please mark the LOAN box. Loan tapes are limited to a maximum of four tapes per 2 week loan period. Additional requested tapes will be sent after the first order has been returned.

001 002 003 004 005 006 007 008 009 010 011 012 013 014 015 016 017 018 019 020
021 022 023 024 025 026 027 028 029 030 031 032 033 034 035 036 037 038 039 040
041 042 043 044 045 046 047 048 049 050 051 052 053 054 055 056 057 058 059 060
061 062 063 064 065 066 067 068 069 070 071 072 073 074 075 076 077 078 079

SHRP and Special Interest Videotapes Requested: (For Loan Only)

 # _____ # _____ # _____ # _____ # _____ # _____ # _____

MAIL REQUESTS TO:
Illinois Department of Transportation
Bureau of Local Roads & Streets
Technology Transfer Center - Room 205
2300 S. Dirksen Parkway
Springfield, IL 62764

FAX (217)785-7296

FOR OFFICE USE ONLY:

Order # _____

Date Rcv'd. _____

Mailed _____

Illinois Interchange

The Technology Transfer (T^2) Program is a nationwide effort financed jointly by the Federal Highway Administration and individual state departments of transportation. Its purpose is to interchange the latest state-of-the-art technology in the areas of roads and bridges by translating the technology into terms understood by local and state highway or transportation personnel.

The Illinois Interchange is published quarterly by the Illinois Technology Transfer Center at the Illinois Department of Transportation. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect views of the Illinois Department of Transportation, or the Federal Highway Administration. Any product mentioned in the Illinois Interchange is for informational purposes only and should not be considered a product endorsement. Subscriptions are free and are available by writing to:

Illinois Technology Transfer Center
Illinois Department of Transportation
2300 South Dirksen Parkway - Room 205
Springfield, IL 62764

Program Manager:
KEVIN BURKE ..... (217) 785-5048
Graphics Design Systems Specialist:
AMY NEALE ..... (217) 782-1682
Training Development Technician:
ROY WILLIAMSON ..... (217) 785-2350
FAX ..... (217) 785-7296

T^2 Advisory Committee

The people listed below help guide and direct the activities of the Illinois T^2 Program. You are encouraged to contact any of them to comment or make suggestions.

Craig Fink, (Chairman), County Engineer, DeWitt County
RR#2, Box 82P, Clinton, IL 61727
(217) 935-2438

Douglas Bishop, County Engineer, Perry County
3698 State Route 13/127, Pinckneyville, IL 62274
(618) 357-6556

Ed Reeder, Carbondale Director of Public Works
P.O. Box 2047, 200 S. Illinois Ave., Carbondale, IL 62901
(618) 549-5302

Lynn Krauss, Director of Public Works
9446 S. Raymond Ave., Oak Lawn, IL 60453
(708) 499-7816

Eldon Stahl, Medina Township Highway Commissioner
Peoria County, R.R. 1, Dunlap, IL 61525
(309) 579-3101

Olen Kibler, Newman Township Highway Commissioner
Douglas County, 608 North Howard, Box 73,
Newman, IL 61942
(217) 837-2723

Printed by the authority of the State of Illinois - 8/03- 4,500

Visit our website at www.dot.state.il.us/blr/t2center.html or E-mail us at T2LRSDOT@nt.dot.state.il.us

Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, Illinois 62764

FIRST CLASS MAIL
U.S. POSTAGE
PAID
Springfield, Ill.
Permit No. 880